

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		Page of Pages 1 8		
2. AMENDMENT/MODIFICATION NO. 001		3. EFFECTIVE DATE February 18, 2000		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
6. ISSUED BY Bureau of Reclamation Lower Colorado Region P.O. Box 61470 Boulder City NV 89006-1470		CODE http://www.lc.usbr.gov/~g3100/		7. ADMINISTERED BY (If other than Item 6)		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and ZIP code)				(T)		9A. AMENDMENT OF SOLICITATION NO. 00-SQ-30-0024	
				T		9B. DATED (SEE ITEM 11) February 14, 2000	
						10A. MODIFICATION OF CONTRACT/ORDER NO.	
						10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☒ is extended, ☐ is not extended.

Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing Items 8 and 15, and returning 1 copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS,
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(T)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. **IMPORTANT:** Contractor ☐ is not ☐ is required to sign and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

Project Title: Recondition Generator Heat Exchangers, Hoover Dam Powerplant, Boulder Canyon Project, Arizona - Nevada

Purpose of Amendment: The purpose of this amendment is to (1) extend the Required Delivery Schedule; and (2) make minor changes to the specifications.

Receipt of Quotes: The date for receipt of quotes is hereby extended from February 28, 2000 to March 3, 2000. The time and place for receipt of quotes remain 4:00 p.m., Pacific Standard Time, at the Bureau of Reclamation, Lower Colorado Regional Office, Boulder City, Nevada (see block 9 of the "Solicitation/Contract/Order for Commercial Items," Standard Form 1449).

Acknowledgment: See block 11 above regarding how to acknowledge this amendment. The acknowledgment must be received at the place designated for receipt of quotes (see block 9 of the "Solicitation/Contract/Order for Commercial Items," Standard Form 1449).

Quote Modification: See block 11 above if you have submitted your quote and now desire to modify it or withdraw it.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)	

Description of the Changes:

1. In Part II - Contract Clauses:

a. Page II -1, paragraph 1(B): Extended the Required Delivery Schedule for both generators from 75 to 120 days.

2. In Part III - Statement of Work:

a. Page III - 11, paragraph C.4.2.c.: Replaced a paragraph stating the tubing specifications with a paragraph describing tubing requirements.

b. Page III - 12, paragraph C.4.2.d.: Added Drawing No. 6-H-521 of the Westinghouse heat exchanger as a required submittal for marked drawings.

Instructions:

Remove

II -1 and II - 2

III - 10 thru III - 13

Replace with Revised

II -1 and II - 2

III - 10 thru III - 13

PART II - CONTRACT CLAUSES

1. Addendum to 52.212-4, Contract Terms and Conditions--Commercial Items

The following contract terms and conditions are also applicable to this acquisition:

(A) 1452.204-70 Release of Claims--Department of the Interior (Jul 1996)

After completion of work and prior to final payment, the Contractor shall furnish the Contracting Officer with a release of claims against the United States relating to this contract. The Release of Claims form (DI-137) shall be used for this purpose. The form provides for exception of specified claims from operation of the release.

(B) 52.211-8 Time of Delivery (Jun 1997) Alternate III (Apr 1984)

(a) The Government requires delivery to be made according to the following schedule:

REQUIRED DELIVERY SCHEDULE		
Item No.	Quantity	Within Days After the Date of Receipt of a Written Notice of Award
% 1.	Four (4) Reconditioned Heat Exchangers for G.E. Generators	75 120
% 2.	Two (2) Reconditioned Heat Exchangers for Westinghouse Generators	75 120

The Government will evaluate equally, as regards time of delivery, offers that propose delivery of each quantity within the applicable delivery period specified above. Offers that propose delivery that will not clearly fall within the applicable required delivery period specified above, will be considered nonresponsive and rejected. The Government reserves the right to award under either the required delivery schedule or the proposed delivery schedule, when an offeror offers an earlier delivery schedule than required above. If the offeror proposes no other delivery schedule, the required delivery schedule above will apply.

OFFEROR'S PROPOSED DELIVERY SCHEDULE		
Item No.	Quantity	Within Days After the Date of Receipt of a Written Notice of Award
1.	Four (4) Reconditioned Heat Exchangers for G.E. Generators	
2.	Two (2) Reconditioned Heat Exchangers for Westinghouse Generators	

(C) WBR 1452.223-80 Asbestos-Free Warranty--Bureau of Reclamation (Oct 1992)

(a) The Contractor warrants that all items delivered, or work required by the contract shall be free of asbestos in any form whatsoever except for the use of asbestos cement pipe.

(b) The Contractor may request the Contracting Officer to approve an exception to this prohibition when an asbestos-free product is not available. Such requests shall be fully documented and submitted as soon as possible after the Contractor determines that an asbestos-free product is not available. Contracting Officer disapproval of a request for an exception shall be final and not subject to the Disputes clause of this contract.

(D) WBR 1452.225-82 Notice of Trade Agreements Act Evaluations--Bureau of Reclamation (Oct 1998)

In accordance with the Agreement on Government Procurement, as amended by the Uruguay Round Agreements Act (Pub. L. 103-465), and other trade agreements, The Trade Agreements Act applies to Bureau of Reclamation acquisitions. Reclamation will evaluate acquisitions at or above the dollar thresholds listed below without regard to the restrictions of the Buy American Act:

(a) Construction (\$7,143,000 or \$6,909,500 if NAFTA country construction materials are being offered);

(b) Supplies or services:

- (1) Mexico (\$53,150);
- (2) Canada (\$186,000);
- (3) Israel (\$186,000); and
- (4) All other designated countries (\$186,000).

(E) WBR 1452.242-80 Postaward Conference--Bureau of Reclamation (Jul 1993)

(a) Prior to the Contractor starting work, a postaward conference (as described in FAR Subpart 42.5), will be convened by the contracting activity or contract administration office. The Contractor's Project Manager shall attend the conference. If the contract involves subcontractors, a representative of each major subcontractor is also required to attend.

(b) The conference will be held at Hoover Dam.

(c) The Contracting Officer and the Contractor will agree to the date and time of the conference after award of the contract. In event of a conflict in schedules, the Contracting Officer shall establish the date for the conference.

(d) The Contractor shall include any associated costs for attendance at the conference in its offer.

SUBSECTION C.4 - RECONDITION GENERATOR HEAT EXCHANGERS

C.4.1. Recondition Generator Heat Exchangers, General

The Bureau of Reclamation, Lower Colorado Dams Facilities Office, Hoover Dam Powerplant, has a requirement for the reconditioning of six (6) generator heat exchangers. These six (6) heat exchangers have been removed from various generators and are presently in storage in the Central Warehouse yard, approximately 1.5 miles west of Hoover Dam, Nevada. Large transportation vehicles can easily access this storage area. Upon request, the Government's forklift and/or crane will be made available with an operator for loading the heat exchangers onto a transportation vehicle. The Central Warehouse facility hours are 6:30 am to 5:00 pm (Pacific Standard Time), Monday through Thursday.

The Contractor shall transport the six (6) heat exchangers to its facility, dismantle and replace all cooling tubes and fins, replace tube sheets (G.E. coolers only), clean the heat exchanger water boxes and cover plates and restore to original dimensions, reassemble, and return the units to Hoover Dam's Central Warehouse. Prior to reassembly, the Contractor shall remove existing paint from the exterior portion of the heat exchanger water boxes and cover plates and from all structural support framing and bracing. The Contractor shall apply new coats of paint as specified for the exterior of the heat exchanger water boxes and cover plates and for all structural support framing and bracing. Prior to final acceptance by the Bureau of Reclamation, the reconditioned heat exchangers shall satisfactorily pass the pressure tests in accordance with the requirements stated below.

The Contractor shall be responsible for packing, loading, and securing the generator heat exchangers prior to removal from the storage site. In addition, the Contractor shall be responsible for any damage that may occur in the handling and transportation of the heat exchangers. These requirements shall be in accordance with clause WBR 1452.247-900 Preparation for Shipment and Handling.

C.4.2. Heat Exchangers

a. General.--Two (2) of the heat exchangers are from generators that were manufactured and installed by Westinghouse Electric and Manufacturing Company. Four (4) heat exchangers are from generators that were manufactured and installed by General Electric. The overall size of each heat exchanger, surface area, weight, and cooling capacities are comparable. The most significant differences between the two manufacturers are in the location of the inlet and outlet flanges for the connecting cooling water pipes and in the size (diameter) of the copper-finned cooling tubes. At present, the Westinghouse heat exchangers are interchangeable with other Westinghouse units and the same applies for the G.E. heat exchangers.

The normal operating temperature of the generator stator windings is 60 to 75 degrees Centigrade.

b. Technical Data.-

(1) Westinghouse Heat Exchangers.--These existing generator heat exchangers are Westinghouse Surface Air Coolers, 2500 sq. ft. surface area. These heat exchangers are six (6) pass, counter flow, straight tubes, 138 tubes, 8' 5-3/4" end to end (8' 4" exposed length) with an outside diameter of 1.0 inches, and a minimum wall thickness of 0.049 inches. The cooling fins are approximately 0.012 inches thick and have an installed outside diameter of 1-3/4 inches, with seven (7) fins per inch of tube length. The original cooling tubes appear to be Admiralty Brass, ASTM B111, C44300, tension-helical wound copper finned solder dipped tubing. The tube sheets are Naval Brass plate. See attached outline Drawing No. 6-H-521 for dimensions.

(2) General Electric Heat Exchangers.--These existing generator heat exchangers are G.E. Surface Air Coolers, catalog No. 8669436 G-2, Type SF. These heat exchangers are six (6) pass, counter flow, straight tubes, 366 tubes, 9' 6" end to end (9' 4" exposed length) with an outside diameter of 0.625 inches, and a minimum wall thickness of 0.049 inches. The cooling fins are approximately 0.012 inches thick and have an installed outside diameter of 1 inch, with eight (8) fins per inch of tube length. The original cooling tubes are Cupro-nickel (70% Cu, 30% Ni), ASTM B111, with copper fins. The water boxes and heads are a cast iron material with gasketed integral baffles. The tube sheets are Naval Brass plate. See attached outline Drawing No. T-4936503 for dimensions.

c. Materials.--The Contractor shall furnish and install new tube sheets for the General Electric coolers only. The new tube sheets shall be cut to size and the tube holes drilled and reamed. The new tube sheets shall be Naval brass plate.

The Contractor shall furnish and install new heat exchanger tubes in six (6) heat exchangers for Hoover Dam Powerplant. Regardless of the metallurgical composition of the original tubing (i.e. Copper, Cupro-nickel, or Admiralty brass), the new cooling tubes shall be Admiralty brass, ASTM B111-95, C44300. The tubes shall be attached to the tube sheets in a manner as to be free from any leakage. Each tube shall be provided with copper fins, 0.015 inch thick. The copper fins shall be tension-wound and fastened securely to the tube by solder dipping. The molten solder shall be a lead-free material.

~~The tubing shall be 5/8-inch diameter with one bell end; a minimum wall thickness of 0.049 inch; an overall diameter (tube with fins) of 1 1/8-inch; and a fin thickness of 0.015-inch with 8 fins per inch. The overall length of the tubes are approximately 9'-6".~~

% Replacement tubes shall be of similar design, type, size, and number of fins per inch so that
% the cooling surface areas remain essentially the same as the original heat exchangers.

Prior to ordering the tubing from a supplier, it shall be the responsibility of the Contractor to verify the exact length necessary, the portion of tube to be finned, and the location of the tube support collars.

Prior to placing the fins on the tubes, the supplier shall perform a hydrostatic pressure test on each tube to a pressure of 200 psi. Tubes that leak or can not maintain the pressure will be rejected. In accordance with Paragraph C.1.3. (Submittal Requirements) and Table 1A (List of Submittals), the Contractor shall submit documentation and proof that the supplier has

successfully pressure-tested each tube. This submittal for the tubing shall also include certification from the supplier that the minimum wall thickness of 0.049-inch has been achieved in all cooling tubes.

All hardware (nuts, bolts and studs) shall be replaced and internal threads cleaned before reassembly. All bolts and studs shall be carbon steel, Grade B, conforming to ASTM A307-93, and the nuts shall be Grade A, heavy hex nuts, ASTM A563-96.

All gaskets shall be non-asbestos and designed for use in water/air heat exchangers and shall seal with no seeping. The gasket shall be fabricated from one continuous piece of gasket material. Splicing or overlapping will not be permitted. Provided it meets industry standards for this type of heat exchanger, the use of red neoprene rubber gasket material would be acceptable. Using a rubber gasket material with an inner layer of fabric or a vegetable fiber gasket material should be avoided.

d. Reconditioning.--The water boxes, covers, and tube sheets shall be reconditioned and returned to original dimensions and tolerances, all sealing surfaces shall be smooth and the six-pass arrangement shall be maintained. Reconditioning may require minor amounts of welding to fill any surface irregularities and/or machining to smooth out any surface irregularities. A method of welding that has been successful for repairs on bronze water boxes is heli-arc or TIG welding with Naval bronze rod.

In accordance with Paragraph C.1.3. (Submittal Requirements) and Table 1A (List of % Submittals), the Contractor shall submit marked copies of Drawings No. T-4936503 (General % Electric) and No. 6-H-521 (Westinghouse) indicating any changes in the dimensions and notes describing the actual repair work that was performed on each heat exchanger.

e. Delivery and testing.--After the generator heat exchangers have been fully reconditioned, the Contractor shall deliver them to the Hoover Dam Central Warehouse. The Government's forklift and/or crane with an operator will be made available for unloading the heat exchangers.

At the Central Warehouse, each heat exchanger shall be hydrostatically tested to 75 pounds per square inch gauge (PSIG) for a minimum of 5 minutes or until inspection for potential leaks had been completed. The Contractor shall provide all regulating valves, pressure gauges, and necessary connection pieces to complete the testing. Upon request, the Government will provide the following utilities: 1) Water, delivery pressure varies; 2) Compressed air, up to 200 psi; and 3) Electricity, 110 or 220 volts.

In accordance with Paragraph C.1.3. (Submittal Requirements) and Table 1A (List of Submittals), the Contractor shall submit test data results of all hydrostatic pressure testing, indicating the applied pressures, duration of testing, and any other pertinent data achieved during testing. The test shall demonstrate compliance with the specifications prior to final acceptance of the heat exchangers.

f. Payment.--Payment for reconditioning generator heat exchangers will be made at the unit price offered therefor in the schedule, which price shall include the cost of all labor, equipment, materials, and incidentals required for dismantling and replacing all cooling tubes and fins; cleaning and servicing the water boxes and covers; replacing miscellaneous hardware and gaskets; reassembling the components of the unit; and painting.

The cost of loading and transporting the generator heat exchangers to and from the Hoover Dam Central Warehouse Yard shall be included in the unit price offered in the schedule for reconditioning generator heat exchangers.

The cost of performing and satisfactorily passing the hydrostatic pressure tests on each heat exchanger prior to final acceptance of the work shall be included in the unit price offered in the schedule for reconditioning generator heat exchangers.

C.4.3. Painting Requirements

a. Painting.--The exterior metal surfaces, support frame and water boxes, shall be coated with an alkyd primer conforming to Federal Spec. TT-P-645B (1990) and alkyd gloss enamel, low volatile organic content (VOC) conforming to Federal Spec. TT-E-489H (1988) and Notice 1 (1992). The primer shall be gray in color and the alkyd gloss enamel shall be white in color.

The heat exchangers with the bronze water boxes and cover plates shall be thoroughly cleaned and inspected but will not require additional interior surface coating with epoxies.

b. Surface preparation.--Surface preparation for the exterior metal surfaces, support frame and water boxes shall include removal of all rust scale and foreign substances by scrapping, chipping, wire brushing, grit blasting, commercial grade sandblasting, or other effective means. Commercial grade sandblasting shall be defined as conforming to SSPC-SP10 -- Near white condition.

The existing paint on the exterior metal surfaces, support frame and water boxes shall be treated as a lead based paint. Removal, containment, monitoring, and disposal of waste material shall be performed in accordance with the regulations for disposal of hazardous waste. In accordance with Paragraph C.1.3. (Submittal Requirements) and Table 1A (List of Submittals), the Contractor shall submit proof and documentation that these waste materials have been legally disposed of.

c. Safety and health.--Surface preparation includes media-blasting to bare metal for complete removal of lead-based paint and primers. The work area shall be prepared for full containment conditions, including air monitoring, air purification with filters, and worker safety and health monitoring.

All applicable Federal, state, and local requirements shall be followed during the removal of the existing lead-based paints and during the disposal of the hazardous waste debris. This